

Table 2-13. Comparison of Project-Specific Actions - New Disposal Facilities

Impact	No action	Action		
	No new disposal facilities	Aboveground or below-ground disposal	Retrievable storage	Aboveground or below-ground disposal and retrievable storage
Preliminary capital cost (million \$)	\$15	\$112-619, plus cost of pretreatment.	\$720-3,578, plus cost of pretreatment.	\$160-658, plus cost of pretreatment.
Estimated 20-year operating cost (million \$)	\$86, plus cost of cleanup and damages from accidents.	\$51-258	\$370-2,398	\$73-273
Closure (million \$)		\$19-31	Cost of retrieval, treatment, and disposal after storage.	\$37-48 plus cost of treatment and disposal after storage.
Postclosure maintenance and monitoring (million \$)	Cost of waste management eventually required.	\$27-81		\$52-67
Site dedication	Indefinite period of waste storage; site dedication would be required as long as wastes remained in the storage facility or if site were to become contaminated by accidental release.	Site dedication would require up to 400 acres, plus buffer zones around the facilities. These areas are 0.2 percent of total SRP natural area.	Site dedication not required. Sites used for storage would be returned to a natural condition or reclaimed for other nonrestricted uses.	Disposal facilities would be dedicated for waste management purposes. Up to 400 acres, plus buffer zones, would be required. Sites for the retrieval storage portion available for other use after wastes are removed to permanent facilities.
Groundwater	Wide range of short-term impacts possible.	New aboveground and belowground disposal facilities would be designed to meet applicable EPA or DOE standards or guidelines (essentially zero release or ALARA). No adverse groundwater effects expected.	Retrievable storage facilities would be designed with zero release or ALARA features to detect and contain spills and leaks. No adverse groundwater effects expected.	All new disposal and storage facilities would be designed for essentially zero or ALARA releases. No adverse groundwater effects expected.

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Table 2-13. Comparison of Project-Specific Actions - New Disposal Facilities (continued)

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Impact	No action	Action		
	No new disposal facilities	Aboveground or below-ground disposal	Retrievable storage	Aboveground or below-ground disposal and retrievable storage
Surface water	Surface streams could be affected by accidental releases of stored wastes.	No significant impacts expected.	Same.	Same.
Health effects	Health effects would result from accidental releases of hazardous chemicals or radionuclides from stored wastes. Level of risk has wide range.	The essentially zero or ALARA release design would prevent radionuclide and hazardous chemical health effects.	Same.	Same.
Aquatic ecology	A range of short-term aquatic impacts possible under the accidental release scenarios.	No impacts expected.	No impacts expected.	No impacts expected.
Terrestrial ecology	A range of short-term terrestrial impacts possible assuming accidental releases of present and future wastes stored.	New belowground and aboveground disposal facilities would require clearing and development of land. No contaminant-related impacts expected.	Construction of retrievable storage sites would require clearing and development of land. No contaminant-related impacts expected.	Combination modifications would require clearing and development of land. No contaminant-related impacts expected, due to zero release or ALARA design features.
Habitats/wetlands	Accidental releases of hazardous chemicals and radionuclides could have short-term impacts on wetlands and habitat.	Loss of habitat of up to 400 acres, or 0.2 percent of total SRP natural area.	Same.	Same.
Endangered species	No impacts.	No impacts.	No impacts.	No impacts.
Archaeological and historic sites	No impacts.	One candidate site would require additional archaeological survey.	Same.	Same.
Socioeconomics	No impacts.	No impacts.	No impacts.	No impacts.
Noise	No significant impacts.	No significant impacts.	No significant impacts.	No significant impacts.

Table 2-13. Comparison of Project-Specific Actions - New Disposal Facilities (continued)

Impact	No action	Action		
	No new disposal facilities	Aboveground or below-ground disposal	Retrievable storage	Aboveground or below-ground disposal and retrievable storage
Accidents/occupational risks	Waste transport to storage facilities includes risks of fires, spills, leaks, and exposure of onsite facility workers.	Accidents involving spills, leaks, and fires could occur during handling.	High-integrity containers, spill recovery, and other secure provisions would reduce impacts from accidents.	Same.

Table 2-14. Comparison of Project-Specific Actions - Discharge of Disassembly-Basin Purge Water

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Impact	No action	Action		
	Continued discharge to seepage basins	Continued discharge to seepage basins	Direct discharge to onsite streams or evaporation	Continued discharge to seepage basins and study of other mitigation measures
Preliminary capital cost (million \$)	\$0	\$0	\$0-Direct discharge \$7.5 Evaporation	\$125-Moderator detritiation (4 reactors) \$0-Seepage basin discharge
Estimated annual operating cost increases (million \$)	\$0	\$0	\$0-Direct discharge \$18-Evaporation See Table 2-12	\$124-Moderator detritiation (4 reactors) See Table 2-12 \$0-Seepage basin discharge
Site dedication	Seepage and containment basins would be dedicated as needed.	Same.	Site dedication not needed; seepage basins for discharge would eventually be eliminated under either modification. Closure and remedial actions, as required, would return these areas to public use after the 100-year control period.	Seepage and containment basins would be dedicated as needed.
Groundwater	Existing discharge to groundwater and effects would continue.	Same.	Either direct discharge to onsite streams or evaporation would eliminate added impact on groundwater.	Existing discharges to groundwater and effects would continue or, with detritiation, be reduced by about a factor of 2 on the average over the 26-year study period (1987-2012).
Surface water	Existing surface water effects from groundwater outcrops at onsite streams would continue.	Same.	The direct discharge alternative would increase surface-water tritium concentrations due to loss of decay period; the evaporation alternative would decrease surface-water tritium concentrations.	Existing surface water effects from groundwater outcrops at onsite streams would continue.
Health effects	No significant health effects from continued discharge to seepage basins.	Same.	Health effects not expected to change significantly.	No significant health effects from continued discharge to seepage basins.

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Table 2-14. Comparison of Project-Specific Actions - Discharge of Disassembly-Basin Purge Water (continued)

Impact	No action		Action	
	Continued discharge to seepage basins	Continued discharge to seepage basins	Direct discharge to onsite streams or evaporation	Continued discharge to seepage basins and study of other mitigation measures
Aquatic ecology	Minor aquatic impacts would continue under continued discharge to seepage basins.	Same.	No significant impacts.	Minor aquatic impacts would continue under continued or reduced discharge to seepage basins.
Terrestrial ecology	No significant impacts.	No significant impacts.	Minor impacts to terrestrial ecosystems could result from liquid releases to onsite streams through direct discharge.	No significant impacts.
Habitats/wetlands	No significant impacts.	No significant impacts.	Increased liquid releases through direct discharge could have minor impacts on existing habitat and wetlands.	No significant impacts.
Endangered species	No impacts.	No impacts.	No impacts.	No impacts.
Archaeological and historic sites	No significant impacts.	No significant impacts.	No significant impacts.	No significant impacts.
Socioeconomics	No impacts.	No impacts.	No impacts.	No impacts.
Noise	No significant impacts.	No significant impacts.	No significant impacts.	No significant impacts.
Accidents/occupational risks	No significant occupational risks.	Same.	Same.	Same.